QUANTA

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*** 52 Page BUMPER ISSUE ***

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Information on the Association

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library. There are active national subgroups. Details are given in the Member's Guide and in this magazine.

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Quanta Magazine

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CHAIRMAN'S NOTES   John Mason

I am looking forward, once more, to seeing as many of you as possible at the Annual General Meeting which this year will be held at 3rd Davyhulme Scout H.Q., Conway Road, Davyhulme, Manchester on Sunday 13th April. Also at the Dinner to be held on the preceding evening, Saturday 12th April – see details elsewhere in this issue.

This issue contains, in the centre, the papers for that meeting. Please read them carefully.

If perchance you are unable to attend please use the enclosed proxy form to record your vote on the matters to be put to AGM

EDITORIAL   John Gilpin

It is with great pleasure that I welcome you all to the start of QUANTA's Twenty-Fifth year. To reach this milestone is a great achievement in itself. Although we have fewer members than we had some years ago, those of us that are left represent the core of QL knowledge across the world. I am also pleased to note that our appeal to members in the last issue to come forward and help in the running of QUANTA has not fallen on deaf ears and that there are murmurings that one or two of you are prepared to find out more about the running of your association. As was expected, everything was left until the last minute and the deadline for nominations past with only two nominations received. However the committee have the powers to co-opt members willing to stand and any such offers will be reflected at the committee meeting following the AGM in April. My grateful thanks go out to those who have shown sufficient interest in the workings of QUANTA to stand for committee thereby potentially reducing the workload of the present committee members. It is still not too late for you to join us. Just send Sarah Gilpin an email or letter (contact details are inside the front cover) and I am sure that she will be only too pleased to send you full details.

Enjoy your QLing during the current year and I hope to bring you a bi-monthly Magazine full of interest and useful articles for all to enjoy.

Remember, If you have anything to say, this is the place to say it. All articles for publication in QUANTA Magazine should be sent to:
editor@quanta.org.uk
or by post to my home address. Thank you.

QUANTA COMMITTEE PRÉCIS   Sarah Gilpin

The committee met at Cherwell Valley on 3rd February 2008, this is a précis of that meeting. The matters arising from the AGM 2007 were considered and:

1)   The membership count has been made as at Dec. 31st 2007

2)   A special resolution will be proposed to increase the fee in clause 9.1 of the constitution from £300.00 to £500.00

3)   A news reporter is being considered.

The officer's reports, the unaudited accounts and the membership report for the AGM were scrutinised, accepted and are published in this issue. (Note: the Audit has now been completed).

Two nominations had been received for committee and all the existing officers are willing to stand for another year.

The two Special Resolutions for change to clauses 9.1 and 12 of the constitution were agreed. (They are included this issue, together with the AGM agenda and other mandatory notices.)

The workshop programme was discussed. It is hoped that an autumn workshop can be arranged, perhaps in Hove as the usual venue in Byfleet has been removed from the Workshop Calendar. The workshop held at Solihull in October 2007 was a great success and we would like to thank the West Midlands Subgroup for their support.

The committee is looking to hold the AGM 2009 at a special workshop event similar to 'QL is 21' but in the West Midlands to celebrate QUANTA's 25th Birthday. The proximity of Birmingham Airport and the number of motorways in the area should provide easy access to all members worldwide.

The committee were saddened to hear that Tony Firshman will no longer be involved in QL activity and wish him well for the future.

It was agreed that the AGM 2008 should include a repair section so anyone who has any questions or problems, please come with your QL. A dinner will be arranged and a non-returnable deposit of £10.00 payable to Nemqlug will be required by the Secretary to book your place.

A REACTION TO PRIORITIES　　　　Bob Spelten

Comments on Steve Poole's article 'Priorities'
(QUANTA Volume 24, Issue 6, Page 22)

What Steve calls an unwanted reassignment of variables is in fact a deliberate feature of SuperBASIC and explained in detail in 'QL SuperBASIC, The Definitive Handbook' by Jan Jones (chapter 4, page 18).

It is for example frequently used in commands in the QPTR and EasyPTR toolkits.

These commands are often called with empty variables and their values are altered by the command to be tested after their return. So it can also be an effective S'Basic tool to get multiple values returned from just one procedure or function, called with different sets of variables.

Back to Steve's 'problem'. Another solution could therefore be to slightly change the functions themselves.

```
n=0: PRINT func_1(n),n\\func_2(n),n
:
DEFine FuNction func_1(p)
  q=p +10: RETurn q
END DEFine
:
DEFine FuNction func_2(p)
  q=p +100: RETurn q
END DEFine
```

Now p and thus n are unchanged and the calculation is returned in q. It is even so, if the argument p was written as p% or p$, it is still treated as a float within the function because n is a float. But of course if you would try to do some string manipulation on p$ within the function an error is reported.

[See Steve's Reply to this reaction later in this issue. Ed]

SAVING PROGRAMMES IN ARCHIVE   Dilwyn Jones

AN OVERVIEW

[Having followed a thread on this topic on the ql-users list I realised just how little I knew regarding the different ways of saving Archive programs. Dilwyn Jones has come up with some of the answers ED]

Briefly...
_prg is a plain text Archive program, saved with save 'filename_prg'

_pro is an "object" (tokenised) program which can be protected or unprotected.

_pro files can be saved in two ways:
save object 'filename_pro'
save protect 'filename_pro'

The only difference between the two _pro types is that the byte at file position 6 is 0 for unprotected, 1 for protected.

I think that the main advantages of _pro programs over _prg ones is that:
 (1) the _pro programs are slightly smaller, as they are tokenised.

(2) the _pro programs are slightly faster loading, as there is no need to tokenise at loading time.

The advantages of _prg program files was that they were plain text, so they were easier to read outside Archive - in an editor if you wished (e.g. Quanta editors could import them into their word processors!) - and they worked on all versions of Archive, whereas the _pro files could vary slightly between Archive versions, causing some loading difficulties if loaded into a different version of Archive than that in which they were created (as I found to my cost, until I found a copy of the right version of Archive).

The "Runtime Archive" was a special version of Archive released by Sinclair and Psion to allow software developers to do what Imre Dominik did, which was to write Archive-based programs with the option to protect their code from view. The Runtime Archive had a few extra facilities compared to standard Archive, e.g. machine code interface, line graphics characters and so on. The issue was slightly clouded by the fact that some

of these features made their way into later versions of Archive, but were not consistent. I do have a copy of the manual and a disk version 2.32 of Runtime Archive which I bought specifically to produce packages like Cocktails Waiter.

Hopefully, an article will follow in the near future (Great to see that somebody at QUANTA is keeping an eye on the list for sources of potential articles like this!)

BTW, The release of Cocktails Waiter is NOT an excuse for the QUANTA committee to turn up a little the worse for wear at the next AGM!

[PITY! You all know that the current QUANTA Committee likes to test things out very thoroughly before giving them their 'Seal of Approval'!! Thanks Dilwyn, we all look forward to your further article on this topic Ed]

NEXT QUANTA SPONSORED EVENT

NEMQLUG MANCHESTER WORKSHOP & QUANTA AGM 2008
AT

**3rd Davyhulme Scout Headquarters,
"The Endeavour", Conway Road,
Davyhulme, MANCHESTER. M41 0TE**

**Saturday & Sunday 12th / 13th April 2008
From 10.00 am. To 4.00 pm. Daily.
QUANTA AGM at 2.00 pm. Sunday.**

**Ring Sarah Gilpin on
0161 - 865 2872 for full details
Or email:
Secretary@quanta.org.uk**

Referring to Oct/Nov 2007 Quanta Magazine - Page 36 - "Sound of Silence"

n the above article John Roberts poses the question - 'I have one Extra High Density Disk that refuses to show any of its contents!'

What could be the cause of this aggravation?

Perhaps the Disk Drive is faulty - try on another 4MB Disk Drive

Putting an ED Disk into a 2MB Disk Drive will not recognize the ED Floppy.

Floppy Disks won't last for ever - perhaps this one has given up the ghost and doesn't want to work any more!

Hopefully you've got the info backed up?

A Backup solution is to take an Image of the QL Floppy using a PC and Store the IMAGE on a Compact Disc using the PC. This Works for 720K and 1.44MB QL Floppies but I haven't tried it with a 3.2MB Floppy as I do not have a 4MB Floppy Drive in the IBM PC.

Whilst the ED Floppy wont give up its contents - does the 4MB Disk Drive recognize that there is a Floppy when inserted?

AND when you ask it for information!

i.e. dir flpl_ or, if it's in flp2_ then dir flp2_
Typing - dir flpl_ or dir flp2_ followed by [Enter] should get a reply.

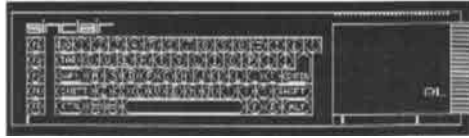Mind you putting the Floppy into FLP2_ and typing DIR flpl_ [Enter] would really be unhelpful!

For instance:-

If you put a DOS 2MB floppy in the flpl_ Drive and - dir flpl_ [Enter] then the screen info advises this is a MSDOS HD 2880/2880 - that is, the 2MB Floppy has been formatted to 1.44 MB and there are 2880 sectors available on a newly formatted disk

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Q U A N T A

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If you put a QDOS formatted 2MB floppy in Drive_flpl_ and go - dir flpl_ [Enter] - then the screen info advises that this is a QDOS HD 2880/2880
that is, the 2MB Floppy has been formatted to 1.44 MB and there are 2880 sectors available on a newly formatted disk

Pro rata - ED Disk's will format under MSDOS to 2.88MB but under QDOS to 3.2MB.

The question is what formats will the Expanded QL or the various emulators handle? If you have a QL with 4MB Disk Drives then you can Format in QL Format:-

    1MB Floppies to 720KB - 1440/1440
    2MB Floppies to 1.44MB - 2880/2880
    4MB Floppies to 3.2MB - 6440/6440

If you also have an IBM PC or Clone does it have a 4MB Disk Drive? Unlikely unless you've specifically installed one!

Taking a 3.2MB Disk, QL Formatted from your QL and putting it into a PC Disk Drive which has a 2MB Floppy Disk Drive and is running QPC will end in failure. The 2MB Floppy Drive will not recognise the QL 3.2MB Floppy Disk.

Additionally if you have a 4MB Floppy Drive in the PC will QPC recognize the 3.2MB QL Floppy Disk? Maybe NOT!

Do you have two x dual floppy disk drives and have connected up the WRONG PAIR? I.e. you think the Floppy Disk Drives are ED but they are NOT!

One more thought - have you accidentally formatted the unreadable floppy? Typing dir flpl_ or flp2_ will reveal: -

QDOS HD 6440/6440 with ALL sectors available! But NO files!

One further thought: Have you accidentally formatted the floppy disk as a 2.88MB MSDOS Floppy? Using this with the QL will end up with NO recognition at all.

There you go. Above are some thoughts on what may be causing your ED Floppy problem!

No doubt there are more but nothing else comes to mind at the moment.

All the best.

EXPORTING TO CSV FILES   Dilwyn Jones

This article discusses a legacy PC file format called CSV (or Comma Separated Values) and its application in helping us to transfer spreadsheet or database files between QL and PC. At one time, CSV files were to PCs what Export files were to QL Psion programs.

CSV files are fairly simple text files containing lists of values from a grid, or columns of text, or fields of a database. Many QL programs can generate the Psion export files, so I thought that if I could come up with a program to convert the export files to CSV format it would be one way of transferring spreadsheet and database data to a PC.

For example, if you have stored family history data in Archive, export the Archive database to a normal export file then run it through this little program (which I've called EXP2CSV_BAS) to convert the export file to a CSV file, then transfer that to the PC and import it into the PC program.

So the rather long winded transfer method is:

     1. Export the data from the QL program.
     2. Run it through the EXP2CSV_bas program to convert to CSV file.
     3. Transfer CSV file to PC.
     4. Import into PC program.

Using this EXP2CSV_bas program, I have successfully transferred data from Abacus and Archive to M$ Excel in Windoze, for example.

PSION EXPORT FILES

A Psion export file format is documented in the QL User Guide in the Information section after the Psion program guides. Basically, the first line contains a list of the field names, and subsequent lines contain the data from each field exported. Each full record takes one line in an export file. Strings are enclosed in quotes - if the string contains a quote symbol, it must be doubled up, e.g. John "the man" Doe would need to be represented as "John ""the man"" Doe". Numbers are not quoted. The field

names should end in '$' for strings, anything else is regarded as a number. The first field should apparently always be text. Here's a simple example, quoted from the manual:

"cashflow$","sales","costs","profits"<LF>
"January",1000,500,500<LF>
"February",1050,530,520<LF>
"March",1100,560,540<LF>

In this example, each record has four fields called cashflow$, sales, costs and profits. The $ in cashflow$ indicates this is a string type field, The other 3 fields are all numeric. Each line ends with a LF CHR$(10) according to the manual, although in my experience export files also work where the lines end with CR+LF too.

Export files should usually end with CHR$(26) to ensure that the end of file can be generated. The Psion programs decide this for themselves when exporting data, you need only worry about this if creating your own export format files, e.g. using PRINT# as shown in the QL User Guide.

CSV FILE FORMAT

In a CSV file, each record is stored as a line made up of all the fields of that record, separated by a comma. A field can be "folded" (contain a linefeed) as long it's enclosed in double quotes.

The text of a field doesn't have to be enclosed in double quotes, but if the field is to contain a double quote symbol, the field text must be bounded by double quotes, and the double quote itself should be represented by a double pair of quotes, e.g. a field containing the text DILWYN "QL" JONES would be represented by "DILWYN ""QL"" JONES"

Likewise, if the field text is to contain a comma, that field should be enclosed in quotes, e.g. SAY 1,2,3! should be "SAY 1,2,3!"

Leading or trailing spaces in a field are normally ignored and stripped off when loaded, although by putting the text of the field in quotes you can force it to see the spaces as part of the data.

If the field text is enclosed in quotes, these quotes are the "field delimiters", i.e. they show the start and end of the field.

Just because a field data is enclosed in quotes, you shouldn't assume it's text. The quotes may enclose a number - the type of data is generally deduced from whether or not the field contains a number, not by whether the field is enclosed with quotes.

Unlike the first line of an export file, the first line of a CSV file need not contain field names, although it is quite legitimate for a program to supply them and for the importing program to ask the user if the first line contains field names or not and work accordingly.

Between records (lines) you can use LF (10) or CR+LF (13+10).

EXAMPLE CSV FILE

Using the example quoted from the QL User Guide above, the first line is optional, although most CSV files do not include a first line like this.

cashflow$,sales,costs,profits

The above line can be included if you wish, but it may just appear as the first record in some programs (easy enough to delete if required). Generally, only the data appears in the CSV file:

January,1000,500,500
February,1050,530,520
March,1100,560,540

Quite simple isn't it (until you start messing with quotes and commas, etc, as described above). Generally, adding quotes does no harm if done properly, other than adding a bit of extra size to the file with redundant quote marks. PC programs will generally analyse the data on importing to find out what's numeric and what's plain text.

Figure 1 - The EXP2CSV_bas listing.

```
100 REMark EXP2CSV_bas by Dilwyn Jones, Feb 2008
110 REMark convert Psion export file to CSV format
120 :
130 CLS : CLS #0
```

```
140 INPUT #0,'Psion export file name > ';ip$
150 INPUT #0,'CSV file name        > ';op$
160 OPEN_IN #3,ip$ : OPEN_NEW #4,op$
170 include_fieldnames% = 0 : REMark change to 1 to include field names
180 lf$ = CHR$(13)&CHR$(10) : REMark end of line characters for CSV
file
190 :
200 REMark read field names list from export file
210 fields = 0 : last = 0 : PRINT'FIELD NAMES : ';
220 REPeat program
230   fn$ = File_Entry$ : fields = fields + 1
240   PRINT !fn$; : IF include_fieldnames% = 1 : PRINT #4,fn$;
250   IF last = 1 THEN
260     IF include_fieldnames% = 1 THEN PRINT #4,lf$;
270     EXIT program
280   ELSE
290     PRINT #4,',';
300   END IF
310 END REPeat program
320 PRINT \
330 :
340 CLS #0 : records = 1 : REMark read records 2 to n
350 :
360 REPeat program
370   FOR a = 0 TO fields-1
380     fn$ = File_Entry$
390     IF fn$ = CHR$(26) THEN EXIT a
400     PRINT !fn$;
410     IF (',' INSTR fn$) OR ('"' INSTR fn$) THEN
420       PRINT #4,'"'&fn$&'"'; : REMark quote strings containing , or "
430     ELSE
440       PRINT #4,fn$;
450     END IF
460     IF last = 1 THEN PRINT #4,lf$; : EXIT a : ELSE PRINT #4,',';
470   END FOR a
480   PRINT
490   IF fn$ = CHR$(26) THEN EXIT program
500   records = records + 1 : AT #0,0,0 : PRINT #0,'RECORDS:';records
510 END REPeat program
520 :
530 CLOSE #3 : CLOSE #4
```

```
540 :
550 PRINT #0,'Program finished.' : STOP
560 :
570 DEFine FuNction File_Entry$
580   IF EOF(#3) : RETurn CHR$(26)
590   ch$ = '' : item$ = INKEY$(#3)
600   IF item$ = CHR$(26) : RETurn item$
610   IF item$ = CHR$(10) OR item$ = CHR$(13) : RETurn ''
620   IF item$ = '' THEN
630     item$ = '' : Numeric = 0
640   ELSE
650     Numeric = 1 : IF item$ = ',' THEN RETurn
660   END IF
670   REPeat get_info
680     ch$ = INKEY$(#3)
690     IF ch$ = CHR$(10) OR ch$ = CHR$(13) THEN
700       last = 1
710       REPeat fl_loop
720         IF EOF(#3) : EXIT fl_loop
730         fl_loop = FPOS(#3)
740         k$ = INKEY$(#3)
750         IF k$ <> CHR$(10) AND k$ <> CHR$(13) THEN BGET #3_loop
: EXIT fl_loop
760       END REPeat fl_loop
770       EXIT get_info
780     END IF
790     IF ch$ = ',' AND Numeric = 1 : last = 0 : EXIT get_info
800     IF ch$ = '' OR (Numeric = 1 AND ch$ = ',') THEN
810       k$ = INKEY$(#3)
820       IF k$ = CHR$(10) OR k$ = CHR$(13) THEN
830         last = 1 : REMark end of line
840         REPeat fl_loop
850           IF EOF(#3) : EXIT fl_loop
860           fl_loop = FPOS(#3) : k$ = INKEY$(#3)
870           IF k$ <> CHR$(10) AND k$ <> CHR$(13) THEN BGET #3_loop
: EXIT fl_loop
880         END REPeat fl_loop
890         EXIT get_info
900       ELSE
910         IF ch$ = '' AND k$ = ',' THEN
920           last = 0 : EXIT get_info
```

```
930      ELSE
940       BGET #3(#3)-1
950      END IF
960     END IF
970    END IF
980    item$ = item$ & ch$
990  END REPeat get_info
1000  RETurn item$
1010 END DEFine File_Entry$
```

Some notes on the listing, in case you wish to adapt it. There is no error trapping, to keep the program reasonably short for publication.

The program opens channel #3 to the input file (the export file) and channel #4 to the output file (the CSV file).

The main routine is the function called File_Entry$. This fetches one field of the file at a time. It returns the field value as a string and sets the variable "last" to indicate if it is the last item on the current line. As it stands, the routine uses global variables, many could be set as LOCal variables if you wish. The variable "last" needs to be global.

Line 170 sets a variable called "include_filenames%" to determine if the first line of the export file (the field names) is added to the CSV file. You can see how this is done in the first loop called "program". This loop also counts the number of fields on each line (fields per record, the variable "fields")

The second loop called "program" does the task of stepping through the remaining records. The "a" loop steps through all fields of each record. Note how line 410 determines whether the field needs to be enclosed in quotes or not in the CSV file output, by using INSTR to locate quotes or commas in the strings. You may wish to extend this to check for leading and trailing spaces in strings as these may be stripped by some PC programs if unquoted.

The program prints the data to the screen, but not necessarily in the same format as the file output.

APPEAL FROM A CONTRIBUTOR   Steve Poole

I was somewhat shocked to see six articles signed Steve Poole in the last issue of QUANTA Magazine. Firstly, I do not want QUANTA to become the SP fan-club! Secondly, I will find it extremely difficult to keep up the pace of production...

Of course, I understand that copy from other members may not always be over-abundant, but hope you can goad some into putting pen to paper. Luckily Dilwyn is still productive, and with a very interesting rewritten old program at that. If only members would realise that they are probably sitting on a gold-mine of home-made code that would interest plenty of readers.

And what about non-code related articles of general interest? Science tells us that the universe is infinite, and therefore that the number of subjects is also infinite. One of my main objectives in writing for Quanta and QL Today is to interest people in Science through computing. This is the only way to avoid the ever-growing trap of media obscurantism which is slowly eroding democracy and leading us into a world run by a few narrow-minded big financial groups led by short-term interests.

Enough of this diatribe! Keep up the good work...

Best Wishes,

Steve Poole

*[The above text was originally sent to 'The Editor' but as it contains thoughts that others have expressed in this Magazine, I thought it worth including in this issue. Are **YOU** sitting on a 'gold mine' of short programs or other articles of general interest that others could share? If so, please send them in to:-*
editor@quanta.org.uk - Ed]
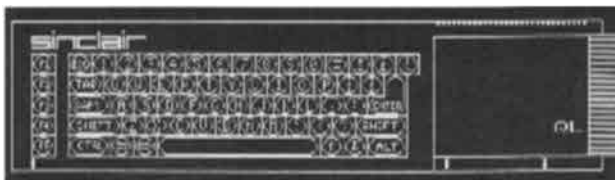
Quanta Magazine
NOTICE CONVENING
ANNUAL GENERAL MEETING 2008

Notice is hereby given that the Twenty-fourth Annual General Meeting of QUANTA will be held at 3rd Davyhulme Scout Headquarters, Conway Road, Davyhulme, Manchester M41 0TE on 13th April 2008 at 2 p.m. for the following purposes:

1. To receive the Annual Report of the Committee.

2. To receive the Annual Accounts and Auditor's Report.

3. To receive the Membership Secretary's Report.

4. To elect members of the Committee.

5. To appoint an Auditor and authorise the Committee to fix his/her remuneration.

6. To consider and vote on two Special Resolutions as set out below:

SPECIAL RESOLUTION Number 1

Background:- At the 2007 AGM the meeting suggested that the "sum of three hundred pounds sterling" which is specified in Clause 9.1 must be deposited with the secretary when requisitioning a Special General Meeting is no longer adequate and that it should be increased to £500 or £600.

Committee have considered this suggestion and agree that having regard to the passage of time since the deposit was set, the sum to be deposited should be increased to £500.

Committee therefore recommends the Annual General Meeting to approve Special Resolution No. 1 as set out below -

Special Resolution No. 1

That in Clause 9.1 the phrase "three hundred pounds sterling" be deleted and replaced with the phrase "five hundred pounds sterling"

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SPECIAL RESOLUTION Number 2

Background:- The Constitution as approved on 14th August 1988 included a Clause 12.0 Winding Up. At that time QUANTA was growing quite quickly, and the possibility of such an event arising was remote.

Time has moved on, QUANTA membership is appreciably less than in 1988, and moreover there has been marked reluctance to volunteer to serve either as an Officer or Ordinary Committee Member.

Committee have reviewed the situation and have come to the view, albeit with some reluctance, that Clause 12 needs to be updated so as to provide trigger points which would initiate winding up given certain events.

Committee, therefore, recommend the AGM 2008 to approve -

Special Resolution No. 2 - That -

Clause 12 WINDING UP of the Constitution be revoked and replaced by a **New Clause 12 WINDING UP** as set out below -

12   Winding Up

12.0   In the event of there being no valid candidate presented for election as Chairman at an Annual General Meeting then the whole of the provisions of Clause 12 Winding Up shall come into effect

12.1 Clauses 5.2, 5.3, 5.4, 5.5, and 5.6 shall be suspended

12.2 The outgoing Officers and other Committee Members shall be elected as the New Committee.

12.3 The New Committee shall use their best endeavours to find, within three calendar months of the date of the said Annual General Meeting, a member willing to take on the office of Chairman.

12.4 In the event of such a member being found then a Special General Meeting shall be convened, within a further period of three calendar months for the sole purpose of formally electing the said member as Chairman, and Clauses 5.2, 5.3, 5.4, 5.5, and 5.6 shall be reinstated as and from 1st February next ensuing.

12.5 If however no such member is found then, notwithstanding the provisions of Clause 9.1 (Calling Special General Meetings),

three clear calendar months notice shall be given of a Special General Meeting at which members may by Special Resolution resolve to wind up QUANTA. In such case the assets shall be disposed of at open auction and after discharging all liabilities the proceeds together with all remaining funds and property shall be handed over to the British Red Cross Society or such other charity or charities as the members decide.

12.6 The term "winding up" shall not encompass the merging of QUANTA with another club and in the event of such a merger the Members will determine by Special Resolution the disposi-tion of QUANTA net assets.

By Order of the Committee

Sarah Gilpin, Secretary.

CHAIRMAN'S REPORT 2007   John Mason

The 2007 AGM with associated workshop was held at Hove, and followed by a second workshop at Solihull in October. Both were constrained to one day meetings as attendances in 2006 suggested this was the most appropriate

It was the first time that QUANTA had held a workshop in the West Midlands. The location proved to be attractive especially to certain members that we have not seen previously at workshops. The meeting rooms were of a size that added to the impression of a well attended meeting. Excellent lectures and demonstrations were given by Simon Goodwin and Dilwyn Jones. Alexia Southern, our youngest member, was delighted to win the competition organised by Simon.

The Magazine has continued to flourish thanks to articles/contributions received from Steve Poole, David Buckley, Hugh Rooms, David McCann, George Gwilt, Geoff Wicks, Dilwyn Jones, Tony Firshman, Albert Newell, Mike Bedford-White, John Roberts, Simon Goodwin and of course members of your committee. The Editor will be pleased to receive all contributions you may offer so as to be able to maintain the high standard achieved this year. The subscription level to the electronic version confirms that it is well worth doing.

Dan Abbott's hard work and the change in host has resulted in an attractive revitalised Website.

MATTERS RAISED BY 2007 AGM

As requested Committee have reviewed the suggestion that the deposit to be made when a Special General Meeting is requisitioned should be raised to £500 or £600, and have concluded it should be raised to £500. – see Special Resolution No. 1.

Committee have also considered the suggestion that they should appoint a News Reporter, and have come to the conclusion that whilst it is highly desirable to do so, the available resource was not sufficient to implement same in 2007.

CONSTITUTION

When the Constitution was approved on 14th August 1988 QUANTA was growing rapidly, and the possibility that it might ever need to contemplate winding-up more than remote.

Time has moved on, membership is appreciably down on 1988, and there has been marked reluctance to volunteer for Committee.

With considerable reluctance Committee have come to the view that there is need to clarify how such a procedure might be implemented if and when such a need might arise.

The AGM Agenda therefore contains a Special Resolution No. 2 for consideration.

COMMITTEE 2008/2009

The retiring Committee are eligible and willing to stand for 2008/2009. Additionally I am pleased to be able to report that Dilwyn Jones has agreed to accept nomination as an ordinary Committee Member for the coming year – a long term Quanta member, Dilwyn brings with him a wealth of QL experience to Committee. Derek Stewart also was willing to serve on Committee but unfortunately, due to a job change, has had to withdraw.

WHAT NEXT

Subscription rates for 2008/2009 have been reviewed and the conclusion has been reached that they should remain unchanged.

Having regard to attendance at Workshops in 2007 Committee plan to support a Workshop concurrent with the AGM at Manchester, and a second workshop in the autumn of 2008.

Once again there are no exceptional items to report in the QUANTA Accounts for the year ended 31st December 2007. The 'Bottom Line' is a very pleasing result, but let's start at the top and compare the year just ended with the previous year.

INCOME

Subscriptions are down but only by an amount which reflects the continuing drop in membership over the last year.

Sale of Goods to Members includes an item of £39 paid by a member to purchase some missing back issues of the QUANTA Magazine for his (now) complete collection.

Advertising income has stopped altogether since, in order to contain the file size of the electronic version of the publication, we no longer print the huge graphic 'Trader's' advertisements in the magazine.

Donations include all the income derived from the sale of ex member's second user equipment. Our grateful thanks to Rich Mellor who is the driving force behind the sale of such items on our behalf. This effort has resulted in an increase in income over the year of £480. (£397 after Tax)

Interest and Tax refunds have reduced as expected since interest rates offered on our savings account are continually being reduced.

EXPENDITURE

The anticipated increase in Magazine printing cost is just about that forecast and does cover 7 issues whereas last year only covered 5. This is because the final issue of the year (December2006/January2007) was not invoiced until the end of January 2007 – after the accounts year had closed. This increase is slightly offset by the expected reduction in Magazine postage following the introduction of the EMAG version of the publication to those members who have requested it in this format.

The write down of stocks of "QL is 21" items in 2006 to reflect the lower of Cost Price or Net Realisable Value showed a higher than usual

figure in the 2006 accounts, a more realistic figure being calculated for 2007 despite donating the last of the QUANTA Sweatshirts to children of our members' families. (They were all 'SMALL' size anyway.)

OVERHEADS

Total Overheads have been held to a 2% increase over the last year despite the additional expense of the Workshop held in Solihull last October and the slight increase in Accountancy charge caused by Catherine Banks moving out of the area and our new accountant, Elizabeth Armstrong, having to charge us VAT on her fee.

This leads to a very modest loss of just over £66 for the year, the smallest loss for a number of years.

BALANCE SHEET

Just a couple of items here worthy of note.

The £2,150 listed under Prepayments and Debtors represents the loan of that amount to Rich Mellor as agreed at last year's AGM. This is repayable by mid April 2008. This figure is reflected in the Deposit Account balance from which the loan was taken a year ago. The item of £150 shown as Cash in hand – J Shelton Float (provided many years ago to enable him to purchase postage stamps for the QUANTA Magazine) has now been repaid in full but too late to show in these accounts. Thus, our current assets are less than £200 down on last year's figure. With slight changes to our current liabilities a resulting change in total assets of £66, this being represented by the loss on the Income and Expenditure account.

With no foreseeable unusual events on the QUANTA Calendar, I can predict a similar outcome for 2008 with results at or slightly below the break-even point. I know that Rich Mellor is currently promoting the sale of second user parts on our behalf and the current committee are committed to maintaining their costs at the minimum level possible.

On behalf of QUANTA and all its members, I would like to thank Elizabeth Armstrong – Auditor – for her "sterling" work and in particular for stepping into the breach when Catherine Banks moved away from the district. We all hope that she will be able to support us in the coming years.

Signed: John Gilpin - QUANTA Hon. Treasurer.

TO ALL QUANTA MEMBERS

The Proxy Form which you will find on the next page Is your chance to vote at the AGM on 13th April even if you can't be present on the day. It is purposely on the middle page so that you can remove it without damaging the rest of the magazine, fill it in and return it to:

Mrs. Sarah Gilpin,
QUANTA Secretary,
181, Urmston Lane,
Stretford,
Manchester.
M32 9EH

To be received by her not later than 6th April 2008

Remember, this is <u>YOUR VOTE.</u>

<u>USE IT</u>.

NEMQLUG INVITE YOU ALL TO JOIN THEM
In MANCHESTER
for a 2-day WORKSHOP and QUANTA AGM

Venue: 3rd Davyhulme Scout Headquarters, Conway Road, Davyhulme, Manchester. M41 0TE

Saturday 12th April at 10.00 am. to 4.00 pm.
and
Sunday 13th April 2008 at 10.00 am. to 4.00 pm.

The AGM will be held at 2.00 pm. Sunday 13th April 2008

You are all invited to join us at a **Dinner on Saturday 12th April**, please book your place by sending a £10.00 non-returnable deposit payable to NEMQLUG, to
Mrs S Gilpin, 181, Urmston Lane, Stretford, Manchester M32 9EH
by 31st March 2008.

Hotel accommodation is in short supply that weekend as there is a Man. United football match on Sunday. Our usual hotels are already filling up rapidly. There are currently vacancies at the Mersey Farm Premier Lodge in Sale, Tel No 08701 977 179

Directions to the venue:

By Road; From the M60, Leave at Lostock Junction 9, and take Lostock Road, towards Urmston. Pass the George H Carnall sports centre on the RHS and take the next turn to the right, Conway Road. 3rd Davyhulme HQ is at the bottom of the road on the right hand side.

We hope to arrange a programme of presentations and demonstrations for the weekend. If you have any particular topics that you would like to know more about, please let me know.

Sarah Gilpin.
QUANTA Secretary

QUANTA ANNUAL GENERAL MEETING 13TH. APRIL 2008 - PROXY FORM

I, (Block Caps) ....

Of (address) ....

....

.... **Postcode** ....

Hereby appoint :-
The Chairman of the Meeting or, failing him (see Note 1 below)**:**

....

Of (address) ....

....

.... **Postcode** ....

as my proxy to attend and vote in my name and on my behalf at the Annual General Meeting of QUANTA to be held on 13th April 2008 and at any adjournment thereof. Unless instructed to abstain, or vote for or against the resolutions (as set out in the notice convening the meeting) by placing an "X" in the box(es) below, the proxy will vote at his/her discretion.

ORDINARY RESOLUTIONS	FOR	AGAINST	ABSTAIN
1. To receive the Annual Report of the Committee.	☐	☐	☐
2. To receive the Annual Accounts and Auditor's Report.	☐	☐	☐
3. To receive the Membership Secretary's Report	☐	☐	☐

4. To elect members of the Committee:-

Chairman -	**John Mason**	☐
Secretary -	**Sarah Gilpin**	☐
Treasurer -	**John Gilpin**	☐
Committee Member -	**Dan Abbott**	☐
Committee Member -	**Dilwyn Jones**	☐

	FOR	AGAINST	ABSTAIN
5. To Appoint an Auditor and authorise the Committee to fix his/her remuneration.	☐	☐	☐

SPECIAL RESOLUTIONS	FOR	AGAINST	ABSTAIN
SPECIAL RESOLUTION Number 1	☐	☐	☐

At the 2007 AGM the meeting suggested that the "sum of three hundred pounds sterling" which is specified in Clause 9.1 must be deposited with the secretary when requisitioning a Special General Meeting is no longer adequate and that it should be increased to £500 or £600. Committee have considered this suggestion and agree that having regard to the passage of time since the deposit was set the sum to be deposited should be increased to £500.

Committee, therefore, recommend the Annual General Meeting to approve –

Special Resolution No.1 –

That in Clause 9.1 the phrase "three hundred pounds sterling" be deleted and replaced with the phrase "five hundred pounds sterling"

SPECIAL RESOLUTION Number 2	☐	☐	☐

When the Constitution was approved on 14th August 1988 QUANTA was growing rapidly, and the possibility that it might ever need to contemplate winding-up more than remote. However Time has moved on, membership is appreciably down on 1988, and with considerable reluctance Committee have come to the view that there is need to clarify how such a procedure might be implemented if and when such a need might arise.

Committee, therefore, recommend the Annual General Meeting to approve –

Special Resolution No. 2 –

That Clause 12 WINDING UP of the Constitution be revoked and replaced by a New Clause 12 WINDING UP all as set out below -

12   Winding Up
12.0   In the event of there being no valid candidate presented for election as Chairman at an Annual General Meeting then the whole of the provisions of Clause 12 Winding Up shall come into effect
12.1 Clauses 5.2, 5.3, 5.4, 5.5, and 5.6 shall be suspended
12.2 The outgoing Officers and other Committee Members shall be elected as the New Committee.
12.3 The New Committee shall use their best endeavours to find, within three calendar months of the date of the said Annual General Meeting, a member willing to take on the office of Chairman.
12.4 In the event of such a member being found then a Special General Meeting shall be convened, within a further period of three calendar months for the sole purpose of formally electing the said member as Chairman, and Clauses 5.2, 5.3, 5.4, 5.5, and 5.6 shall be reinstated as and from 1st February next ensuing.
12.5 If however no such member is found then, notwithstanding the provisions of Clause 9.1 (Calling Special General Meetings), three clear calendar months notice shall be given of a Special General Meeting at which members may by Special Resolution resolve to wind up QUANTA. In such case the assets shall be disposed of at open auction and after discharging all liabilities the proceeds together with all remaining funds and property shall be handed over to the British Red Cross Society or such other charity or charities as the members decide.
12.6 The term "winding up" shall not encompass the merging of QUANTA with another club and in the event of such a merger the Members will determine by Special Resolution the disposition of QUANTA net assets.

Dated this 16th February 2008

Signed: Sarah Gilpin - Secretary

NOTES:

1.   If you wish to appoint as your proxy a person other than the Chairman of the meeting, delete " The Chairman of the Meeting" and insert (in Capitals) the name and address of your desired proxy, who must be a member of QUANTA at the time of the meeting

2.   This form must reach the Secretary, Mrs. Sarah Gilpin, 181 Urmston Lane, Stretford,
        Manchester, M32 9EH, United Kingdom, on or before the 3rd. April 2006.

Quanta Magazine

QUANTA Income and Expenditure Account
For the Year Ended 31st December 2007.

2006			2007
£	£	£	£
	INCOME		
2,986	Subscriptions		2,656
1	Sale of Goods to Members		42
19	Credit Card Charges		15
120	Advertising		0
2	Library Receipts		0
0	"QL is 21"		0
272	Donations		1,167
3,400			3,880
325	Interest Received	307	
23	Less: Taxation (Plus refund)	42	
348			265
3,748			4,145
	EXPENDITURE		
800	Magazine Printing Costs		1,112
485	Magazine Postage Costs		362
0	Sundry Purchases		0
0	"QL is 21" Purchases		0
410	Less: Stock Movement		17
1,695			1,491
	OVERHEADS		
60	Subgroup Support		70
500	AGM Costs		556
391	Committee Meetings		255
1,047	Workshop Costs		1,356
433	Committee Members' Expenses		233
0	Royalties Payable		0
110	Insurances		110
0	"QL is 21"		0
110	Accountancy & Audit		125
20	Bank & Credit Card Charges		15
2,671			2,720
-618	SURPLUS / (DEFICIT) FOR THE YEAR		-66
-618	To/(From) QUANTA Accumulated Fund		-66

John Gilpin (Signed)

Honorary Treasurer.

Quanta Magazine

QUANTA Balance Sheet as at 31st December 2007.

2006 £	£		2007 £	£
		FIXED ASSETS		
	1,075	Equipment at Cost		1,075
	-1,067	Less: Depreciation		-1,067
	8			8
		CURRENT ASSETS		
139		Stock of Goods for Resale	122	
0		Prepayments and Debtors	2,150	
		Bank Accounts:		
770		Current Accounts	695	
11,949		Deposit Account	9,695	
150		Cash in Hand - J Shelton Float	150	
0		Cash in Hand - Treasurer	0	
	13,008			12,812
		CURRENT LIABILITIES		
591		Accrued Charges and Creditors	461	
	591			461
	12,417	**NET CURRENT ASSETS**		12,351
	12,425	**TOTAL ASSETS**		12,359
		FINANCED BY ACCUMULATED FUNDS		
	13,043	Balance brought forward		12,425
	-618	Surplus/(Deficit) of Income for the Year		-66
	12,425			12,359

AUDITOR'S REPORT TO THE MEMBERS OF QUANTA:

I have examined the Income and Expenditure Account and Balance Sheet for the year ended 31st. December 2007 and confirm that they are in accordance with the books and vouchers of the association and the explanation and information provided.

Signed: Elizabeth Armstrong

Name & Address: Elizabeth Armstrong

32, Westmorland Road,
Urmston,
Manchester.
M41 9HL

Quanta Magazine
<u>MINUTES OF THE QUANTA ANNUAL GENERAL MEETING 2007</u>

VENUE: PORTSLADE, WEST SUSSEX

DATE: 15th APRIL 2007

Meeting opened at 2.10 pm.

Members present: John Mason (Chairman), Sarah Gilpin (Secretary), John Gilpin (Treasurer), Steve Wollington, Malcolm Cadman, W.P.J. Bailey, C.V. Cave, Ken Bain, Geoff Wicks, Paul Harris, David Gilham, Alex Wells, Dan Abbott, and Per Witte.

Apologies: Roy Brereton, Chris Grogan, John Southern, Alison Southern and Alexia Southern.

Minutes of the previous AGM: had been distributed and it was proposed that the meeting should accept the minutes as a true and accurate record.
> Proposed by – Christopher Cave
> Seconded by – Ken Bain
> Accepted by a show of hands

Matters Arising: – There were no matters arising. Geoff Wicks gave a vote of thanks to the Secretary for a clear and accurate set of minutes.

Chairman's Annual Report :– John Mason

A précis of the Chairman's report as printed in the Feb/March 2007 magazine was given. John expanded on the history behind the special resolution and pointed out that with current membership around 200, 5% of the membership would equate to 10 people, and in the future at the present rate of decline it would soon be down to just 5 members required to call an Extraordinary meeting. To prevent a repeat of frivolous requests (as had happened in the past) the proposed change is from '5%' to 'a minimum of 20 members'. It had been decided to keep the fee for calling such a meeting at £300.00.

The Chairman had additional points to make to his report on matters that had occurred since the Feb/March 2007 magazine;

Quanta Magazine

Rich Mellor of RWAP had requested a loan to cover the costs of manufacturing 200 QL membranes. This is a second batch of these, the first having been sold, and the committee have approved the application and the money will be paid this weekend. The loan is for one year.

A request has been made that a good use of QUANTA funds would be to give every member a copy of QPC2. This has been looked into with the following results:

The costs would amount to about £9000.00 which would wipe out any reserves QUANTA has.

·	The 2004 survey showed that 30% of our members already have QPC2.

·	It also showed that 30% only have a basic QL and therefore have no interest in QPC2.

It was therefore decided that this request was not a viable or required proposition.

Comments from the floor also pointed out that those who wished to use QPC had already bought it and they would have no need for a second one.

There have been a number of possible projects put forward by the QLUsers. Penlight USB's have been discussed as has QMAC. QMAC has been followed up with the company holding the licence. They are prepared to sell QUANTA the licence for a reasonable sum, but would charge additional fees for finding the source code from their archives. It has been suggested that we approach Phil Borman to see if he has the source code. This is still an ongoing investigation by the committee.

The Chairman's Annual report was accepted.

Treasurer's Report – John Gilpin

The Treasurer's report was as printed in the Feb/March 2007 magazine.

Questions were raised regarding the fixed assets of £8.00, and could these not be completely written off. John replied that to do so could

have tax implications and that he had been advised by the auditor to leave the fixed assets on the list.

Comment was made by Geoff Wicks regarding the Committee meeting and Workshop expenses, that taking the two together they came higher than 2006, but not appreciably higher than in previous years.

It was proposed that the meeting accept the Annual Accounts:
Proposed by – Geoff Wicks
Seconded by – Steve Wollington
Carried by a show of hands.

Appointment of Auditor for 2007/8

It was proposed that QUANTA should use the same auditor, Catherine Banks, for the next year:
Proposed by – Sarah Gilpin
Seconded by – Geoff Wicks
Carried by a show of hands

Membership Secretary's Report – John Gilpin

The current membership has decreased to 198, including 1 renewal and 1 new member at this workshop. It is agreed that all lapsed members since 2005 should be contacted, but that those that have returned their renewal forms specifically noting their non renewal and those known to have died should not be contacted.

Comment from the floor requested that a set date for counting membership is required and could it be Dec 31st. This would be before renewals due Jan 1st. An update on membership numbers and renewals could be given at the AGM. Geoff Wicks asked that the committee consider sending out 2 further editions of the magazine with renewal reminders to those that fail to renew.

Using International bank payments has been looked into; it is expensive and there is the question as to who is responsible for the charges. It has been decided to continue to use the current method of collecting international membership fees.

Quanta Magazine

John announced that we had had an initial take up of email magazine by 10 – 12 members and that any member who would like their magazine in this format should notify the Secretary, Sarah Gilpin.

Comment from the floor suggested that as the additional £3.00 on the subscription for foreign members was to cover additional postage, those taking email magazines could have their membership reduced to £14.00. It should be looked into seriously as this could be regarded legally as discrimination. A second comment was raised about a reduction in membership fee for all those taking email magazines as there would be no printing or postage costs involved. John replied that the printing costs would not be significantly reduced by any further reduction in quantity printed and that postage had in general gone up.

It was proposed that the Membership Secretary's report should be accepted:
    Proposed by – Steve Wollington
    Seconded by – Ken Bain
    It was carried by a show of hands with 1 member voting against the motion.

Committee for 2007/8:

The Proxy form had listed Roy Brereton as a proposed member for the committee but as of 15th April 2007 Roy has withdrawn his nomination and will not stand for committee.

The Chairman declared the nominations are duly elected as the number of nominations was less than the number of committee members required. John welcomed our new member Dan Abbott to the committee. Dan has agreed to be the QUANTA Webmaster and earlier in the day had given a demonstration to members of the work to date on the new Web Site.

Special Resolution to amend Constitution Clause 9.1:

A motion was put to the meeting that the changes to Clause 9.1 as printed in the Feb/March 2007 magazine should be accepted.

    Members present for = 12
    Members present against = 2
    Members present abstaining = 1
    Proxy votes for = 12

The motion was carried by a majority vote of 24 to 2 for the amendment with 1 abstention.

At this point there were some comments from the membership that the fee should be raised, possibly to £500 or £600, as costs for calling such a meeting must have risen. It was suggested that this should be given due consideration by the committee.

The formal part of the AGM closed at this point and it was opened to the floor for matters of general discussion.

Open Discussion:

Geoff Wicks, as editor of QLToday, raised the question of Copyright ownership of articles in the QUANTA magazine, whether it is the author or QUANTA. A line can be inserted at the front of the magazine along the following lines: 'Unless otherwise stated the copyright of all articles in this magazine are the copyright of Quanta'. It was agreed that committee would look into this question.

It was suggested that QUANTA appoint a news reporter for the magazine and the website. Geoff Wicks offered to talk to any news hound we get.

There being no further questions or comments the meeting closed at 3.25 pm. The committee thanked all those who attended.

MEMBERSHIP REPORT 2007 — John Gilpin

As at 31st December 2007, (this date chosen at the request of members present at the AGM 2007 in order to give a consistent annual figure) the QUANTA Membership was made up as follows: (individual 2006 figures at this date are shown in brackets)

	UK	OS
Ordinary Members	155	24
Associate Members	2	Nil
Honorary Members	4	1
Other Members	5	Nil
TOTALS	166(169)	25(27)
Combined Total	191(196)	
Total Members left during 2007	8	
Total Members joined in 2007	3	

John Gilpin (Honorary Membership Secretary.)

QUANTA NEWS   John Gilpin

REPORT ON THE QUANTA WEB SITE   Dan Abbott

The QUANTA web site has undergone some modest changes since it's launch in early 2007. The traders adverts, news and events and QL systems sections have been updated and a small number of magazine articles and program listings are now available for download.

In the long term, the QUANTA committee would like to make the web site more interactive and place the QUANTA software library and back issues in a password protected members area. If there was sufficient demand, we could set up a discussion forum and an area to post SuperBASIC program listings and lists of frequently asked questions (FAQs).

We would be delighted if anyone was willing to provide interesting content for the web site, in particular the section covering different QL compatible systems and emulators.

QUANTA are keen to recruit a news reporter who would seek out interesting news stories within the QL community and contribute to a news blog and rss events feed.

Over the coming months, I will be consulting with QUANTA sub groups, asking for feedback and suggestions on the current web site and some seeking thoughts of how to further develop the site as a resource for members and as a marketing tool for QUANTA. We have already established cross links to web sites maintained by the London and Scottish sub groups. Ideally, each local sub group would nominate a member to manage their sub group web page and pass on a summary of local activities to the QUANTA news reporter.

PAY YOUR SUBSCRIPTION THE EASY WAY   John Gilpin

As part of the QUANTA Web Site development, we are looking to provide **PayPal** facilities to our members, especially those overseas, as the easy method of paying their QUANTA Membership Subscription. It is hoped to have this feature up and running in time for the July 2008 renewal period.

Quanta Magazine
TRADER'S CORNER

QUANTA recommends the following trading members to supply all your QL requirements, information and advice.

Trader's Advertisements can be viewed at:
http://www.quanta.org.uk/traders

QUANTA NEWS (Cont)   John Gilpin

LEAR PCB CAD UPDATE   Dilwyn Jones

Version 6.39 of Malcolm Lear's PCB Cad program is now available from Dilwyn Jones's website.

The most significant change is that you now have the option of running the program as a daughter job. The biggest advantage is a complete cleanup on termination which includes all functions and procedures loaded on program boot-up.

The package is a 914KB download from:

http://www.dilwyn.uk6.net/graphics/index.html

THE $100 QL   Steve Poole

In previous issues of Quanta, I expressed my wish to see a new fast 100 dollar QL. This QL project was mirrored by the 'one PC per child' project of the MIT, who have already put up their price to 170 dollars and it is still rising!

There is also the 'QL on a Stick project', a CD of emulation software to load into a USB stick. This is cheap, but portable PC's are not .. until now. This summer, portable PC's will be sold for around 200 dollars, and the price will then drop considerably. How can they do it?

Well first the screen is only from 7 to 11 inches in diagonal, they run under Linux at 1Ghz, contain no hard, CD, floppy or other disk units, and have 1 Gigabyte Flash memory.

This is totally adequate for most PC uses, as it has built-in web facilities and USB slots for those who wish to interact with other PC's. There is also a slot for graphics cards, so if you are a hard gamer you can fork out for that extra performance.

It has also been said that for third-world users they will be waterproof. They will also be shock-resistant for children, as they contain no moving parts. It's a pity that the Psion pocket computers went out of production too early ... as they already had most of the desired features. So with just a little patience, we should have our fast 100 dollar QL_PCs in time for 'QL is 25'. Then we will all be able to use the latest functionality of QPC3.

SuperBASIC ROUTINES   Steve Poole

n reply to my article on reassignments by Priorities when using PRINT or INPUT, Bob Spelten wrote pointing out that SuperBASIC incorporates this as a specific feature. *[see page 5 of this issue - Ed]* While this is true, the example I gave gets the right answers mathematically, but back-tracking by PRINT gets it wrong. Nuance!

So I thought I would deal with the whole question of routines, as these are notorious for unwanted 'side-effects' that are seldom described in detail.

The Sinclair User Guide Beginner's section describes a routine as a 'Black Box'. You define it and then put data in or get it out without having to worry about what goes on inside. What's more, you can type anything into the QL without doing it harm, learning by trial and error. But this philosophy comes unstuck when Jan Jones describes routines: "SuperBASIC assumes you know what you are doing".

So what are routines? There are two types, PROCedures and FuNCtions. These exist in forms for Floating-Point, Integer% or String$, either in Basic or Machine-code. Here I will only describe Basic Float Procedures, as all the other types are derived from them. A procedure call entered with a line number forms part of a program. Otherwise it is a Direct Command that will be executed immediately.

To Define a routine, just enter its code:

```
100 DEFine PROCedure noisy_program
110  BEEP 12345,67
120 END DEFine
```

To CALL it, just enter it's name:

```
130 noisy_program: STOP
```

So far so good, but now let's deal with numbers:

```
100 DEFine PROCedure Count(counter)
110  counter=counter+1
120 END DEFine
130 :
140 x=1: count x: print x
```

Prints 2: OK? But now let's get straight into side-effects:

```
100 DEFine PROCedure ADD(x)
110  x=x+1: PRINT x
120 END DEFine
130:
140 x=9: y=1
150 ADD y: print x
```

This prints 2 9 !: But Why? So now is the time for a little technical explanation: As you enter each line of code, the syntax is checked (but not the logic), and if the code conforms it is either entered into the program or executed immediately if there is no line number. The variable 'x' in line 100 is called a FORMAL parameter, as it is used to FORM the routine. The variable 'y' in line 150 is called an ACTUAL parameter (or in maths formulae, an ARGUMENT), as it is the global variable that is actually used to call the routine.

Now when the code runs, the interpreter recognises 'DEF' on line 100 and then searches 'END DEF', skipping intervening code. When it reaches the call 'ADD' it looks up the name table to find line 100 which is the start of the routine and then jumps there. Then it scans the formal parameters, and makes a temporary name-table entry for 'x'. So formal 'x' is an intrinsically LOCal name, which is deleted from the name table when the routine RETurns when it encounters 'END DEFine'. So x on line 110, (a routine parameter), has nothing to do with x on line 140, (a global variable)! So when the routine returns, the actual value of 'x', 2 becomes what it was before, ie 9. Oof... Now a side-effect is when you define a routine and call it in a sloppy way and get spurious results. (Remember the Golden Rule: Always test programs with input data that has a known result. This is the true meaning of trial and error. Do not test with unknown results or you will become a member of Simon Goodwin's 'Suck-it-and-see brigade', and end up getting bogged down in nightmares.)

Now for some more advice: Never define formal parameters with the same names as global variables. This reassignment feature was included in Basic for mathematicians who like their Basic code to resemble their self-referential formulae, especially for functions. It is probably the worst trap in SuperBASIC (even for experienced programmers) and a sure route to bug-ridden code.

Now I shall mention FuNCtions. These are basically procedures that not only RETurn, but also return values to expressions which can therefore be used recursively.

```
100 DEFine FuNCtion loop(y)
110  y=y+1: PRINT y: RETurn y
120 END DEFine
130 :
140 x=0: x=loop(x): PRINT x,y
```

This time, no side effects! 'y' on line 140 being undefined before the call, reverts back to zero - no value.

```
100 Define PROCedure Yeuch(x)
110  print x, ie 2
120 END DEFine
130 :
140 Yeuch 'abc'
```

Now for the cherry on the cake: SuperBASIC is a user-friendly language, except for the following mess: The type of formal parameters is defined by the type of the actual calling parameters ... Hence the above gobbledygook!

```
100 Define FuNCtion PI
110 RETurn 3.14
120 END DEFine
130 :
140 PRINT PI
```

Most SuperBASIC commands are in fact defined as Procedures. This example shows you how to redefine PI to return two decimal places only. You can redefine all routines except the structural KEYWORDS, but you must RESET the QL to revert back to the original state.

```
100 DEFine PROCedure Routine(in_,out)
110 LOCal temp
120  temp=in_: out=temp+1: RETurn
130 END DEFine Routine
140 :
150 a=1: b=0: Routine a,b
```

160 PRINT a,b

Now we are getting into Black Boxes: 'Temp' is made Local so that the global variable 'a' corresponding to the in_ parameter remains unchanged after the call. The global variable 'b' is 'unset' before the call, but after the call receives the value of the parameter 'out' after return. So now you can see that Functions are redundant. You can use four inward formals and four outward ones under QDOS. You can also neatly use SELect or other structures to allow RETurned parameters to be chosen at will. So as you can see, routines allow you lots of scope for flexibility, while if you write them carefully they can be clear and practically fail-safe.

I hope this little introduction to programming SuperBASIC Routines will help newer programmers to avoid the horrendous pit-falls of side-effects. I have not mentioned GOSUB routines, as these are totally demoded by Procedures. Integer and string routines must be named routine% or routine$ and return integer or string expressions. Arrays can be used as parameters, but that subject is complex enough to merit its own article!

ICL ONE PER DESK UNIT   Dan Abbott

OPD Related News

- •   OPD BASIC compiler and interpreter found!
- •   OPD ServPack discovered
- •   MegaOPD unearthed

OPD BASIC compiler and interpreter found!

A long lost BASIC compiler and BASIC interpreter have recently been discovered for the ICL One Per Desk. These software tools will make it easier to develop new applications for the OPD and to port SuperBASIC programs from the QL to the OPD. Both programs can be loaded from Microdrive cartridge or Teledrive disc or 'burned' onto EPROMS and fitted into modified ROM packs or ROM capsules. We hope to make the compiler and interpreter manuals available for download from the members section of the QUANTA web site.

C1 BASIC Compiler

The Computer One BASIC compiler (C1 BASIC) takes an interpreted SuperBASIC program and compiles it into a machine code program. The C1 compiler library carries a small overhead of approximately twenty kilobytes or forty blocks of OPD store. Compiler SuperBASIC programs run significantly faster and there is no need to run a separate BASIC compiler from cartridge or capsule.

On selecting BASIC, the user is presented with six options from the main menu : compiler, editor, assembler, monitor, spooler and linker.

The Computer One program editor allows one to edit source code prior to compilation. It was fairly straightforward to compile programs written in ICL BASIC. We have had some success porting simple SuperBASIC programs from the QL to the OPD, though it is advisable to run the BASIC source code through Dave Walkers' OPD/QL Interchange tools.
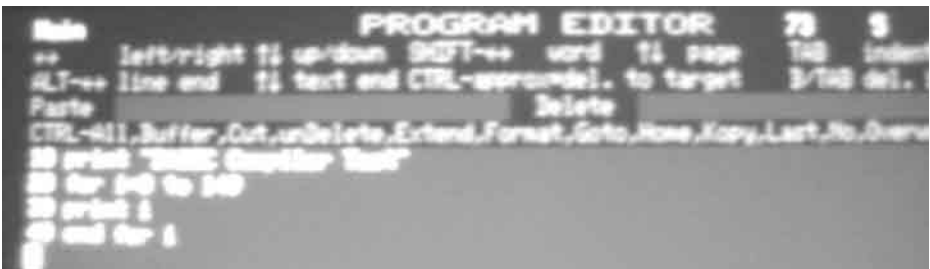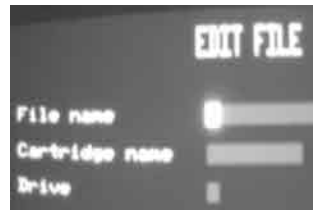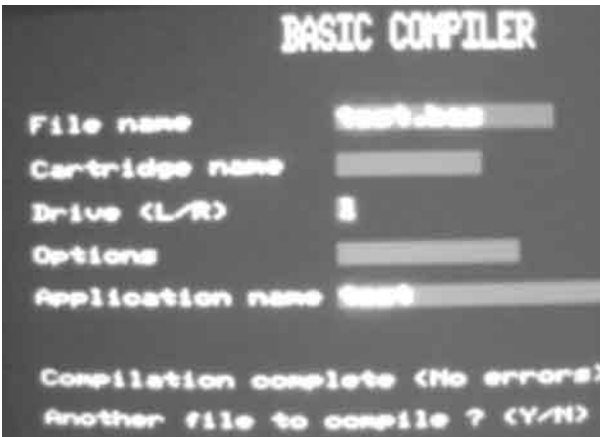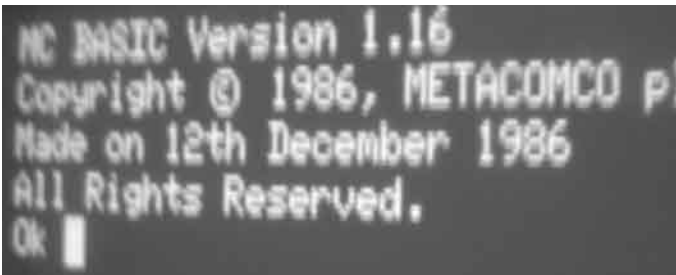
MetaComco BASIC Interpreter

MetaComco developed a number of well renowned compilers for the QL and Atari ST.

The OPD MetaComco BASIC interpreter was delivered in December 1986 and according to the documentation is compatible with Microsoft BASIC.

MetaComco appears to be faster and more efficient than ICL Basic, using less than thirty kilobytes of working memory which equates to approximately sixty blocks of store (see screen shot below).

The interpreter occupies four memory slots so may be fitted as a four ROM capsules or the same number of EPROM chips can be added to a spare OPD ROM pack.

If one is fortunate enough to have a PCML Telestore memory expansion unit and PCML Telestore disc unit, one can load the BASIC interpreter from disc or RAM disc.
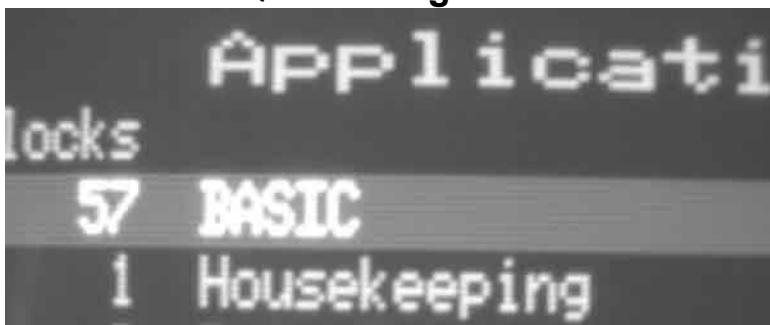
Compiler and Interpreter ROM images

ROM images for the Computer One BASIC compiler and MetaComco BASIC interpreter will be made available in the QUANTA members area in due course. We hope to publish sample SuperBASIC programs which you can use to test the compiler and interpreter, as well as providing step by step instructions for burning ROM images to EPROMS and fitting them into OPD ROM packs. It is surprisingly easy to burn EPROMS on a PC equipped with a parallel or USB programmer or a Sinclair QL equipped with a QEP III programmer.

The OPD memory map is divided into 32K slots. If you intend to run these applications in ROM, you will need four 27C256 EPROMS for the MC BASIC interpreter (4 x 32K = 128K) and two 27C256 EPROMS (2 x 32K = 64K) for the C1 compiler.
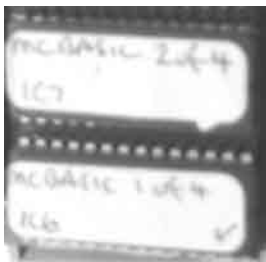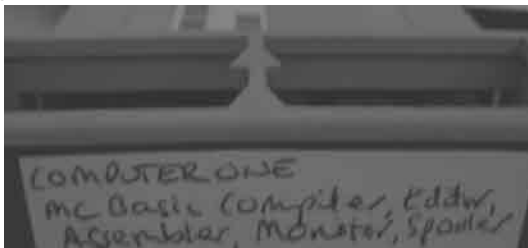
OPD ServPack discovered

We have recently come across an unusual diagnostic tool called ServPack which will aid troubleshooting hardware faults on OPDs.

ServPack was most probably used by ICL test engineers to diagnose OPD faults and to carry out soak tests on the production line. ServPack is a custom designed ROM pack and PAL logic chip which checks each of the OPD's sub systems : dynamic and static memory, the monitor, keyboard, telephone unit, voice synthesiser, Microdrive units and popular expansion units. Paged capsules enable to OPD to overcome the 1Mb memory barrier and access devices such as RAM discs.

The ServPack program fits on two EPROMS and may be fitted and is seen fitted to a standard two slot ROM pack. The PAL chip has yet to be decoded!
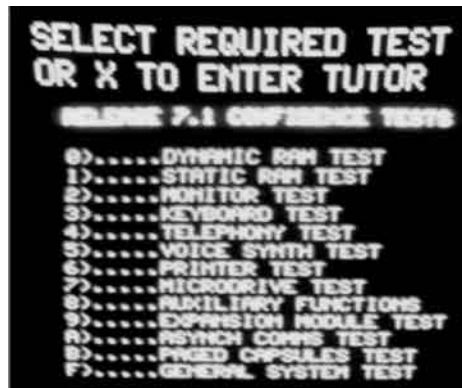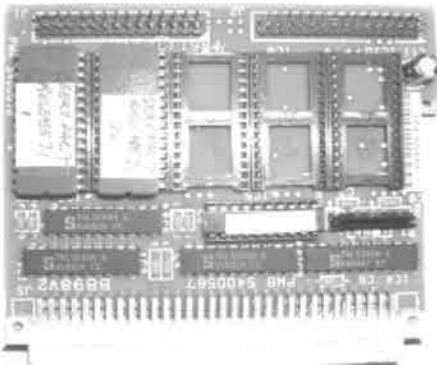
MegaOPD discovered

ICL produced a small number of enhanced OPD's for the American market.

We have recently unearthed a small number of these fascinating machines which give an insight into how the OPD may have evolved if it had been more commercially successful.

'MegaOPDs' have larger on board store (256K rather than 128K), the ability to address up to 4Mb of memory, and enhanced ICL operating system, upgraded modem and a 68000 processor.

Quanta Magazine

The circuit board contains a number of surface mounted chips not seen on the standard OPD.

IN THIS ISSUE   John Gilpin

So, we enter our "Silver Jubilee" year and by the contents of this issue of QUANTA Magazine things seem to be progressing nicely.

In this issue, we have covered a wide variety of topics:

- ❖   Information & reports from the past
- ❖   An outlook of the future
- ❖   Letters regarding previous articles
- ❖   Articles to help with programming
- ❖   Information on future events
- ❖   Help with hardware & Software problems
- ❖   News of the New QUANTA Web Site
- ❖   How to contact the Sub Groups
- ❖   Links with the Traders

Please help us to keep your Magazine varied and interesting. Please send your contributions, no matter how small to
editor@quanta.org.uk Thanks.

SUBGROUP MEETINGS

THE WEST MIDLANDS QL USER GROUP

This long-running group has moved back to its previous venue, the Queens Head pub in the City Centre. Meetings remain open to Quanta members and non-members alike. The Queens Head is in Steelhouse Lane, Central Birmingham, four minutes walk from Snow Hill main-line railway station and has ample street parking nearby.

Meetings are usually on the first and third Monday of each month (but not on Bank holidays unless the previous one was cancelled for that reason). After your first meeting you're expected to pay £1 each time towards the organisation and monthly newsletter costs - except once a year when the group pays all those who attend a pound instead (We provide food twice a year for those who attend the AGM and the group's birthday party) and at meetings we discuss all sorts of things, QL-related and otherwise, usually from about 8:20 pm. onwards till 10:30 or later. The group owns QL hardware, a disk library and subscribes to relevant magazines. People can join the mailing list for £3.50 per year, even if they can't attend regularly.

The contact number is Mike Bedford White's, on 0121 605 4438, anytime after 11 am.

Email: **mikebwhite@blueyonder.co.uk**

QUANTA DORSET SUBGROUP

Meetings are held, on the second Sunday of each month at the Merley Community Centre in Harrier Drive, Merley, just south of Wimborne Minster. Time: 2.00 pm. to 5.00 pm. All are welcome.

John Meadows Tel: 01202 576189, or John Mason, 01425 275894.

LONDON QL AND QUANTA GROUP

Meetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome.

Members currently each pay a subscription of £30 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free.

Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc, available for purchase.

Time: 2.00 pm. to 6.00 pm., on the second Sunday of the month.

No meetings are held in either December - winter break, or August summer break. Giving 10 meetings a year.

Malcolm Cadman: Tel: 020 8691 5780

email: QL@mcad.demon.co.uk

NEMQLUG - THE NORTH EAST MANCHESTER QL USER GROUP

Meetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway - Was Junction 7 M63 Motorway). Our informal meetings start at 7 p.m. and finish at 11 pm. All welcome.

Meets on the last Thursday of each month (except December).

John/Sarah Gilpin 0161-865 2872 (thegilpins@btopenworld.com)

SCOTTISH QL USERS GROUP

SQLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming to get the location.

Geogwilt@aol.com

SOLENT SUBGROUP

Meets at Botley Market Hall, all welcome. Park at the back and use side entrance.

1st Saturday of the month from 2.00 pm to 6.00 pm.

Graham Evans, Tel: 023 8040 3350.

SURREY QUANTA SUBGROUP (SQSG)

The group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please phone or email Ken Bain for the latest location.

Meetings are 8.00 to 10.00 pm. On the last Wednesday of each month except December.

Ken Bain - 01932 - 347 432 (to midnight), kenb@bcs.org.uk

SUSSEX QL USER GROUP

Currently without a meeting place, anyone interested should contact Keith Mitchell or Roy Wood.

Roy Wood, 01273 430501 or Keith Mitchell, 01903 742263.